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Robert M. Caruso

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05/26/2004

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EXAMINER

SUKHAPHADHANA, CHRISTOPHER T

ART UNIT

PAPER NUMBER

2625

DATE MAILED: 05/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--|-------------------------------|--|
| Office Action Summary | Application No. 09/771,360 | Applicant(s) CARUSO ET AL. | |
| | Examiner Christopher T. Sukhaphadhana | Art Unit 2625 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 March 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8, 10-12, 15-20, 22-25, 27, 30-39, 42, 43 and 45-50 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-8, 10-12, 15-20, 22-25, 27, 30-39, 42, 43 and 47-50 is/are allowed.
- 6) ☒ Claim(s) 45 and 46 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The Amendment filed 26 March 2004 has been entered in full.
2. Based on Applicant's amendments, the objections to the claims are withdrawn.

Preliminary Matters

3. Examiner thanks Applicant for addressing the Ratnakar reference with respect to claim 10 (see second full paragraph on page 17 of the Amendment filed 26 March 2004).

Drawings

4. The drawings were received on 26 March 2004. These drawings are approved.
5. The Examiner thanks Applicant for catching and correcting the reference number error.

Specification

6. The disclosure is objected to because of the following informalities: Specification, page 4, lines 29-30 mentions an **Appendix A**. Examiner has been unable to locate an Appendix as described. Consider including in the next mailing a copy of the Appendix with a proper statement regarding no new material having been added, or consider removal of the mention of the Appendix from the specification.

Appropriate correction is required. Applicant states in the last paragraph on page 14 of the Amendment filed 26 March 2004 that a copy of the Appendix had been filed twice, however, Examiner notes that there is still no copy of the Appendix in the application file.

Response to Arguments

7. Applicant's arguments, see the last full paragraph on page 16 of the Amendment filed 26 March 2004, with respect to the rejection under 35 USC 102(e) Ratnakar of claim 1 have been fully considered and are persuasive. The 35 USC 102(e) Ratnakar rejections of independent **claim 1**, related independent **claims 15, 22, 31, and 36**, and dependent **claims 2-8, 16-20, 23-25, 32-35, 37-39, 42, and 43**, have been withdrawn.

8. Applicant's arguments, see the last full paragraph on page 17 of the Amendment filed 26 March 2004, with respect to the rejection under 35 USC 102(e) Ratnakar of claim 10 and 27 have been fully considered and are persuasive. The 35 USC 102(e) Ratnakar rejections of **claims 10 and 27** have been withdrawn.

9. Applicant's arguments, see the last sentence of the first paragraph on page 18 of the Amendment filed 26 March 2006, with respect to the rejection under 35 USC 102(e) Suzuki have been fully considered and are persuasive. The 35 USC 102(e) Suzuki rejections of independent **claim 10**, related **claim 27**, and dependent **claims 11, 12, and 30**, have been withdrawn.

10. Applicant's arguments on pages 18 and 19 of the Amendment filed 26 March 2006, with respect to prior art rejections to dependent **claims 38 and 39** are moot in light of Applicant's persuasive arguments to their parent claim 36.

11. Applicant's arguments in the first two paragraphs on page 19 of the Amendment filed 26 March 2004, with respect to the rejection under 35 USC 102(e) of **claim 45** have been fully considered but they are not persuasive.

Applicant argues in substance that:

- a. **Because the claimed compressed block includes a subset of the pixels and does not include all of the pixels in the image, Ratnakar does not read on all the features of the claim.**

The limitation in question reads: "the compressed block including a subset of pixels in the image." If, as Applicant asserts, Ratnakar teaches only compressing the entire image, then Ratnakar inherently teaches the compression of each and all subsets of pixels in the image. The limitation as claimed does not exclude the subset being the whole.

12. Applicant's arguments in the first paragraph on page 15 of the Amendment filed 26 March 2004 regarding the rejections under 35 USC 101 of claims 45 and 46 have been fully considered but they are not persuasive.

Applicant argues in substance that:

- b. **The amendment makes claim 45 consistent with the holding in *In re Lowry* where the Board held that a claim to memory containing stored information recited an article of manufacture was patentable.**

Examiner disagrees for at least the following reasons.

1) Applicant fails to show how *In re Lowry* is relevant to the present application and to the present grounds for rejection of the claims.

2) Applicant cites the reasoning of the Board. The Board was reversed in full by the CAFC (see the Conclusion paragraph of *In re Lowry*), therefore, the Board's reasoning, and thus Applicant's reasoning, is not applicable.

3) The claims of Lowry were not statutory because they recited a memory for storing a compressed image file/data for access by an application program being executed on a computer/data processing system. Rather, they were statutory because of the nature of the claimed ADOs (attribute data objects). Specifically,

“Lowry’s ADOs do not represent merely underlying data in a database. ADOs contain both information used by application programs and information regarding their physical interrelationships within a memory. Lowry’s claims dictate how application programs manage information. Thus, Lowry’s claims define functional characteristics of the memory.” (Fifth paragraph under the Discussion section, *In re Lowry*)

and

“The ADOs follow a particular sequence that enables more efficient data processing operations on stored data. The ADOs facilitate addition, deletion, and modification of information stored in the memory. In sum, the ADO’s perform a function.” (Second paragraph on page 1036 of *In re Lowry*).

In contrast, the present claims do not perform a function and do not exhibit any functional interrelationship with the way in which computing processes are performed.

Claim Rejections - 35 USC § 101

13. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

14. **Claims 45 and 46** are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

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15. **Claims 45 and 46** are directed to a compilation or mere arrangement of data as described in MPEP 2106 IV B 1 (b). Such arrangements of data do not exhibit any functional interrelationship with the way in which computing processes are performed and do not constitute a statutory process, machine, manufacture or composition of matter. Note also the arrangements of data, considered as non-functional descriptive material, cannot alone provide the practical application for the manufacture (i.e. embodiment in a memory).

Claim Rejections - 35 USC § 102

16. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

17. **Claim 45** is rejected under 35 U.S.C. 102(e) as being anticipated by Ratnakar (U.S. Patent 6,038,346, previously cited, "Ratnakar").

18. In regards to **claim 45**, Ratnakar discloses a memory for storing a compressed image file for access by an application program being executed on a computer, comprising: a data structure stored in said memory, said data structure including: dimensions for the image (col 9, line 27); a color palette for the image (col 8, OTHER, ANOMALY, and col 10, TrendList and AnomalyList); a background color of the image (col 9, line 42, I(0,0)); and at least one compressed block (Fig 1, the whole image), the compressed block including a location for the block (col 9, line 42, I(0,0)), dimensions for the block (col 9, line 27, H, W), and at least one

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pixel compressed using a dynamic probability model (col 9, line 61), the compressed block including a subset of pixels in the image.

Ratnakar inherently teaches the compression of each and all subsets of pixels in the image. The limitation as claimed does not exclude the subset being the whole.

Claim Rejections - 35 USC § 103

19. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

20. **Claim 46** is rejected under 35 U.S.C. 103(a) as being unpatentable over Ratnakar (U.S. Patent 6,038,346, cited above, "Ratnakar") as applied to above claim 45, in combination with Maeda (U.S. Patent 6,512,793 B1, previously cited, "Maeda").

21. In regards to **claim 46**, Ratnakar does not expressly disclose the additional limitations as claimed.

Maeda teaches an image including a first frame and a second frame (col 11, line 44 and 55), and the apparatus further comprising a distance frame generator (col 11, line 56, motion vector) for generating a distance frame between the first and second frames of the image.

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate Ratnakar's compression into Maeda's coding because while Maeda uses DCT-based image compression, in the event that the images were palettized synthetic images, one of ordinary skill in the art would want to use Ratnakar's compression method because it is

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specifically designed to losslessly compress palettized synthetic images (Ratnakar, col 4, line 38).

Allowable Subject Matter

22. **Claims 1-8, 10-12, 15-20, 22-25, 27, 30-39, 42, 43, and 47-50** are allowed.

23. The following is an examiner's statement of reasons for allowance: In regards to independent **claims 1, 22, and 36**, none of the prior art of record teaches or fairly suggests at least "selecting a probability model from a probability set, the probability set including at least two probability models, each probability model including at least two probabilities for the pixel color" (as recited in claim 1, and similarly in claims 22 and 36), in combination with the other limitations. The closest prior art of record, Ratnakar (U.S. Patent 6,038,346) does not teach or fairly suggest this limitation (as addressed in the last full paragraph on page 16 of the Amendment filed 26 March 2004). Specifically, while Ratnakar discloses selecting a probability model (any of SUCCESS (col 7, line 53), ANOMALY-n (col 8, line 30), or OTHER-n-m (col 8, line 17)) from a probability set (the set {SUCCESS, ANOMALY-n, OTHER-n-m}), the probability set including at least two probability models, Ratnakar does not disclose the limitation as claimed because while SUCCESS has at least two probabilities (col 7, line 6, and col 6, line 60) neither ANOMALY-n nor OTHER-n-m include at least two probabilities for the pixel color. **Claims 2-8, 23-25, 37-39, 42, and 43** contain allowable subject matter at least by dependency on one of claims 1, 22, and 36. Independent **claims 15 and 31** are allowable for being corresponding decompression claims to claims 1 and 22, respectively. **Claims 16-20 and 32-35** contain allowable subject matter at least by dependency on one of claims 15 and 31. In

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regards to independent **claims 10 and 27**, the reasons for allowance should be evident at least from the last full paragraph on page 17 and the last sentence of the first paragraph on page 18 of the Amendment filed 26 March 2006. **Claims 11, 12, and 30** contain allowable subject matter at least by dependency on one of claims 10 and 27. Independent **claim 47** is former claim 14 rewritten in independent form including the limitations of former claim 13 and claim 10. Claim 14 had previously been objected to as being allowable if rewritten in independent form (paragraph 45 of the previous Action), thus claim 47 is allowable. Independent **claim 48** is former claim 29 rewritten in independent form including the limitations of former claim 28 and claim 27. Claim 29 had previously been objected to as being allowable if rewritten in independent form (paragraph 45 of the previous Action), thus claim 48 is allowable. Independent **claim 49** is former claim 40 rewritten in independent form including the limitations of claim 39 and claim 36. Claim 40 had previously been objected to as being allowable if rewritten in independent form (paragraph 45 of the previous Action), thus claim 49 is allowable. **Claim 50** contains allowable subject matter at least by dependency on claim 49.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

24. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

25. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher T. Sukhaphadhana whose telephone number is (703) 306-4148. The examiner can normally be reached on 9a-5p M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh M. Mehta can be reached on (703) 308-5246. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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